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EPA should resolve issues in Dimock

SCRANTON TIMES TRIBUNE (editorial)

Leaked data from the Environmental Protection Agency indicates internal dissent about its decision to close its investigation of water well contamination in Dimock, Susquehanna County. Issues raised by the EPA's regional staff warrant reopening the inquiry and finding definitive answers. Roughly a year ago the EPA concluded that water for 64 homes in the Dimock area was safe to drink, after residents contended that nearby natural gas drilling had fouled their water supplies. An internal EPA PowerPoint presentation, first obtained by the Washington Bureau of the Los Angeles Times, reveals that staff of the EPA regional office wanted to continue the assessment. The EPA collected data at 11 wells over four years. The PowerPoint presentation offered the conclusion that "methane and other gases released during drilling apparently cause significant damage to water quality." Officials at EPA headquarters rejected that view and curtailed the investigation in July 2012. In March 2012 the agency dropped an investigation of methane in drinking water in Parker County, Texas. In June 2012, the EPA ended a study of drinking water contamination in Pavilion, Wyo., even though it had found heavy contaminants in water, including hydrocarbons. EPA testing in Dimock was limited to contaminants included in the Safe Drinking Water Act, and did not include methane, even though that was the residents' primary concern. Cabot Oil & Gas Corp., the company drilling in and around Dimock, has contended that the methane in water supplies in the area is not related to drilling. Methane is present in the area's aquifers, which are far closer to the surface than the natural gas trapped in the Marcellus Shale formation far below. Yet the EPA PowerPoint presentation identified five water wells where the chemical composition of the methane was the same as that of the gas extracted from deep underground. And a separate Duke University study also showed that the chemical signature of methane in some water wells was the same as that of the deep methane. The PowerPoint presentation is not a definitive contradiction of EPA's decision. But it does raise questions that the EPA is in business to answer. It should return to Dimock and use all of the technology at its disposal to do just that.

Groups say drilling tool will disturb Va. marine life

NORFOLK VIRGINIAN PILOT

While oil rigs drilling off the coast of Virginia are still a question mark in the near future, local environmental groups will be making noise about the possibility today. Beginning at noon, members of Oceana and the Sierra Club will blow horns and clang pots and pans at Waterside Festival Marketplace to symbolize the loud noises made by seismic air guns - devices used to identify oil and gas reserves in the ocean. "The point is to be noisy," said Eileen Levandoski, assistant director of the Virginia Chapter Sierra Club. But it won't be a literal simulation. "We'd be too loud," she said. Surveyors use seismic air guns to send blasts toward the sea floor and measure their echoes to identify drilling prospects. The industry says the method hasn't been shown to hurt marine life and is necessary to open drilling. But environmentalists say it could injure animals and disrupt migration and mating patterns. "The unique part about this technology is that not only is it that first step (toward offshore drilling), but in and of themselves, the air guns are really, really dangerous and destructive," said Caroline Wood, Virginia organizer for Oceana's climate and energy campaign. The U.S. government has estimated that 138,500 whales and dolphins in the Atlantic Ocean will be deafened, injured or killed by the blasts, according to the Virginia Chapter Sierra Club website. The North Atlantic Right Whale - of which only about 500 remain - is among the species at risk. The demonstration, which will be held from noon to 1:30 p.m., is one of many on the East Coast, Wood said, adding that similar demonstrations will take place in Virginia Beach and Alexandria. Debate over offshore drilling, which is years

away even under supporters' most optimistic scenarios, is coming to a head this year. The U.S. House in June approved a bill to lift a moratorium on drilling in Virginia waters. The federal government will release a report this fall outlining the environmental impact of East Coast drilling. Offshore drilling has the potential to create 18,000 jobs in Virginia by 2030, according to Nicolette Nye, vice president of communications and external relations of the National Ocean Industries Association. Locally, drilling faces opposition beyond environmentalists: The Navy has opposed it in the offshore areas it uses, and the federal government has been reluctant to share royalties with coastal states, which local legislators say is key to their support. Still, the environmental groups say they will keep making a clatter. "We just want to make a lot of noise to get people's attention," Wood said.

Oil firms fracking seabed off California

ASSOCIATED PRESS (W. VA.)

Companies prospecting for oil off California's coast have used hydraulic fracturing on at least a dozen occasions to force open cracks beneath the seabed, and now regulators are investigating if the practice should require a separate permit and be subject to stricter environmental review. While debate has raged over fracking on land, prompting efforts to ban or severely restrict it, offshore fracking has occurred with little attention in sensitive coastal waters where, for decades, new oil leases have been prohibited. Hundreds of pages of federal documents released by the government to The Associated Press and advocacy groups through the Freedom of Information Act show regulators have permitted fracking in the Pacific Ocean at least 12 times since the late 1990s and recently approved a new project. The targets are the vast oil fields in the Santa Barbara Channel, site of a 1969 spill that spewed more than 3 million gallons of crude oil into the ocean, spoiled miles of beaches and killed thousands of birds and other wildlife. The disaster prompted a moratorium on new drill leases and inspired federal clean-water laws and the modern environmental movement. Companies are doing the offshore fracking -- which involves pumping hundreds of thousands of gallons of salt water, sand and chemicals into undersea shale and sand formations -- to stimulate old wells into new oil production. Federal regulators thus far have exempted the chemical fluids used in offshore fracking from the nation's clean-water laws, allowing companies to release fracking fluid into the sea without filing a separate environmental-impact report or statement looking at the possible effects. That exemption was affirmed this year by the Environmental Protection Agency, according to the internal emails reviewed by the AP. Fracking fluids can comprise hundreds of chemicals -- some known and others that aren't, since they are protected as trade secrets. Some of these chemicals are toxic to fish larvae and crustaceans, bottom dwellers most at risk from drilling activities, according to government health-disclosure documents detailing some of the fluids used off California's shore. Marine scientists, petroleum engineers and regulatory officials interviewed by the AP could point to no studies that have been performed on the effects of fracking fluids on the marine environment. Research regarding traditional offshore oil exploration has found that drilling fluids can cause reproductive harm to some marine creatures. "This is a significant data gap, and we need to know what the impacts are before offshore fracking becomes widespread," said Samantha Joye, a marine scientist at the University of Georgia who studies the effects of oil spills in the ocean environment. The EPA and the federal agency that oversees offshore drilling, the Bureau of Safety and Environmental Enforcement or BSEE, conduct routine inspections during fracking projects, but any spills or leaks are largely left to the oil companies to report. In a statement to the AP, the EPA defended its oversight of offshore fracking, saying its system ensures that the practice does not pollute the environment in a way that would endanger human health. Oil companies must obtain permits for wastewater and stormwater discharges from production platforms that "ensure all fluids used in the drilling and production process will not adversely impact water quality," the statement said. Oil companies also maintain that much of the fracking fluid is treated before being discharged into the sea. Tupper Hull, spokesman for the Western States Petroleum Association, said fracking is safe and has "never been associated with any risk or harm to the environment" in more than six decades in California. California coastal regulators said they were unaware until recently that offshore fracking was even occurring, and are now asking oil companies proposing new offshore drilling projects if they will be fracking. Because the area of concern is located more than three miles off the state's shoreline, federal regulators have jurisdiction over these offshore exploration efforts. However, the state can reject a permit in federal waters if the work endangers water quality. "It wasn't on our radar before, and now it is," said Alison Dettmer, a deputy director at the California Coastal Commission. Government documents, including permits and internal emails from the BSEE, reveal that fracking off California is more widespread than previously known. While new oil leases are banned, companies still can drill from 23 grandfathered-in platforms in water where endangered blue and humpback whales and other marine mammals often

congregate. In March, a privately held oil and gas company received permission from the agency to frack about 10 miles off the Ventura County coast. The job by DCOR LLC involves using the existing wellbore of an old well to drill a new well. Three "mini-fracks" will be done in an attempt to release oil locked within sand and rocks in the Upper Repetto formation. A month before the application was approved, an official with the BSEE voiced concerns about the company's proposed frack and wanted to know if the operation would discharge chemicals into the ocean. "We have an operator proposing to use 'hydraulic stimulation' (which has not been done very often here) and I'm trying to run through the list of potential concerns," Kenneth Seeley, the BSEE's regional environmental officer for the Pacific, wrote in a Feb. 12 email to colleagues. "The operator says their produced water is Superclean! but the way they responded to my questions kind of made me think this was worth following up on." BSEE officials approved DCOR's application on March 7. The agency told the AP that DCOR's job would use far less fracking fluid than an onshore operation. "For comparison, well stimulation offshore typically uses 2 percent of the liquids and 7 percent of the sand that is used routinely for onshore hydraulic fracturing," the BSEE said in a statement. Oil industry estimates show that at least half of the chemical-laced water used in fracking remains in the environment after an operation. Environmental groups say as much as 80 percent of the fluids can be left behind. The rest gets pumped back up to the oil platform and is piped or barged back to shore for treatment. Companies also can pump the fluids into an old well reservoir to discard it. DCOR, which did not respond to requests for comment, is not the first company to try to tap more oil from California's offshore reserves, nor is the project the most extensive offshore frack here in recent years. In January 2010, oil and gas company Venoco Inc. set out to improve the production of one of its old wells with what federal drilling records show was the largest offshore fracking operation attempted in federal waters off California's coast. The target: the Monterey Shale, a vast formation that extends from California's Central Valley farmlands to offshore and could ultimately comprise two-thirds of the nation's shale oil reserves. Six fracks were completed in the project, during which engineers funneled a mix of about 300,000 pounds of fracking fluids, sand and seawater 4,500 feet beneath the seabed, according to BSEE documents. Venoco's attempt only mildly increased production, according to the documents. Despite greenlighting offshore fracking projects for years, federal and state regulators now are trying to learn more about the extent of fracking in the Pacific even as officials and marine scientists scramble to weigh the possible environmental effects. In January, Jaron Ming, the Pacific regional director of the BSEE, told employees in an email that there had been heightened interest in offshore fracking from within the agency and the public. "For that reason, I am asking you to pay close attention to any [drilling applications] that we receive and let me know if you believe any of them would be considered a 'frac job.'" That same month, BSEE estimated in internal emails that only two such jobs had occurred off California in the past two decades. Weeks later, though, as the agency worked to respond to public requests about fracking offshore, emails show that it had found 12 such instances of offshore fracking. BSEE said it cannot be sure how often fracking has been allowed without going through every single well file. Brian Segee, a staff attorney at the Environmental Defense Center, said the uncertainty makes him skeptical about the actual number of offshore fracks. The Santa Barbara-based environmental law firm, which formed in the wake of the 1969 oil spill, is calling for a moratorium on future fracking in the Pacific until potential environmental effects are studied. Most fracking efforts off California have yielded mixed results. The first time Venoco fracked offshore in the 1990s, it had limited success. Chevron's one try failed. Out of Nuevo Energy's nine attempts, only one was considered very successful, according to company and BSEE records. The practice has been more fruitful in the North Sea and the Gulf of Mexico, where it's more common and the porous nature of the geologic formation makes it easier to extract oil, according to regulators and oil industry experts. Still, oil companies surveyed by federal regulators said they haven't ruled out fracking projects in the Pacific in the future. As fracking technology evolves and companies seek to wring production from old offshore wells, drilling experts caution that strict safety precautions and planning are needed. Working in the open ocean, "you have to be a lot more careful to avoid any spillage," said Mukul Sharma, a professor of petroleum engineering at The University of Texas. David Pritchard, a Texas petroleum engineer who has been working in offshore drilling for 45 years, said offshore fracking "no doubt adds complexity and risk." One concern is that the high-pressure fracking mixture in some jobs might break the rock seal around an old well bore, allowing oil to escape, added another expert, Tulane University petroleum engineering professor Eric Smith. "I'd say it [offshore fracking] is safe," Smith said, "but nothing's a sure thing in this world."

Fracking, fractures and human-induced earthquakes

WEST VIRGINIA PUBLIC RADIO

Is the growth of the gas business in WV shaking up more than the economy? A new Concord University geological initiative could help scientists recognize the potential for man-made earthquakes caused by natural gas drilling. According to Workforce WV, there were over 2,000 associated with oil and gas extraction in 2012, earning nearly \$175-million in wages. But does the drilling leave the ground more susceptible to earthquakes? According to the West Virginia Geological survey there have been about 20 measurable earthquakes in the state in the past five years, more than half of those were in Braxton County where Chesapeake Energy was disposing fluid via deep well injection. Chesapeake voluntarily lowered the pressure of its injections in Braxton County at the request of the West Virginia Division of Environmental Protection in 2010, although they denied the wells had anything to do with the earthquakes. Dr. Joe Allen is a geology professor and the chair of the Division of Science, Math and Health at Concord University. He hopes to understand rock fracturing and earthquakes better by studying West Virginia's geology from Greenland. A grant from the Higher Education Policy Commission is helping to launch the first steps. His trip this fall is to study fossilized fractures in rock, not to be confused with the process of fracking- which we'll get to a little later. Allen says research in Greenland can benefit West Virginians and their understanding of local basement rock. "Southern West Virginia actually is the most seismically active in West Virginia," Allen says. "So again those are deep, we don't have a good seismic array to tell the depth or distribution of seismicity here or even what rock types they're fracturing in and so that's kinda why we have started this other research." Basically, the rocks that Allen needs to look at in order to complete his study are easier to access in Greenland. This same layer of rock is buried under ten-thousand feet of sedimentary in the state, under West Virginia's coal, oil and gas reserves. The idea behind Allen's research is to understand how preexisting patterns in Greenland rock texture, might influence the direction and shape of fractures. So, it's kinda like splitting wood. Sometimes wood will split around a knot while at other times it will go through it. Understanding how these cracks form, where they start and stop, how fast they form and how much stress is involved are all part of the study. A recent study published in Science Magazine called "Injection-Induced Earthquakes", makes a connection between fracking, waste-water disposal, and human -induced earthquakes. Fracking is an industry-invented term that refers to the process of injecting water into rock in order to release oil and gas for collection. The process of fracking takes advantage of existing fractures in the rock to reach gas. Some of that injected water will then be pulled back out of the rock creating what's called "flow-back" or waste water. That water is often then injected into a separate deep well for disposal. The Science Magazine article reports that the actual process of fracking has a low risk of inducing an earthquake. However, the wastewater disposal or injection into deep wells presents a higher risk for creating stronger, human-induced, earthquakes. "There's been a series of earthquakes in the mid-continent of the US in Youngstown, Ohio," Allen said. "There's some in Oklahoma and there's been some recent studies that show a correlation between some of those there in the order magnitude of four to five earthquakes but they are directly related to hydraulic fracturing." "So they were basically man induced earthquakes." The Science Magazine article noted that the 2011 Oklahoma quake destroyed 14 homes and injured two people and a fault, weakened by increased fluid pressure, appears to be the cause. Since 2000 the number of midcontinent earthquakes of magnitude three or stronger has increased from an average of 21 per year to a peak of 188 in 2011 and human induced earthquakes are suspected to be partially responsible. While West Virginia isn't known for generating strong earthquakes, Allen says he believes the potential for damage still exists. For example, a strong earthquake along Pacific fault lines could trigger a local quake since the energy produced from a distant quake travels around the world. Allen says pre-existing faults already weakened by hydraulic injection, waste water disposal, or gas and oil extraction may be more susceptible to movement. So far, federal studies and much of the research surrounding fracking has focused on the chemicals used in the process and the possibility of ground water contamination. The article in Science Magazine says that it seems the more water, pressure or use of both, the more likely there will be a man-made earthquake. Allen's research might help to determine just how vulnerable West Virginia is to man-made earthquakes, because of fractures that already exist deep underground. Dr. Allen's grant is one of four recently awarded to Concord University's Division of Science, Mathematics, and Health. Other professors will use the money to research biomedical chemistry, and enhance classroom experience.

EPA asks judge to reject W. Va. farmers lawsuit

ASSOCIATED PRESS (W. VA.)

The U.S. Environmental Protection Agency wants a judge to affirm its power to make poultry growers get water pollution permits for runoff from their operations - even though it's withdrawn the requirement for a West Virginia farmer who sued. Hardy County farmer Lois Alt is challenging EPA's authority to apply a Clean Water Act provision

to what she says is storm water runoff, calling its action an illegal overreach and a threat to other growers in the Chesapeake Bay watershed. But EPA said in a motion for summary judgment filed Thursday that its authority is clear, and Alt has no justification for an exemption. The EPA had threatened to fine Alt for polluting streams but rescinded the violations after she sued last year. U.S. District Judge John Preston Bailey then denied EPA's motion to dismiss the case because the agency hasn't changed its underlying position that some chicken farms are "concentrated animal feeding operations." That would mean the EPA can require them to obtain permits they've never previously needed. Nor is Alt's mere compliance with the agency's demands enough to render the case moot. Bailey said EPA has issued orders to two other farmers in West Virginia and Virginia virtually identical to the one issued against Alt. The EPA said dust, feathers, and fine particles of dander and manure from Alt's chicken farm could land on the ground, come into contact with storm water and flow into ditches, eventually reaching Chesapeake Bay tributaries. The watershed encompasses parts of Delaware, Maryland, New York, Pennsylvania, Virginia and West Virginia, and all of the District of Columbia. Alt acknowledged there is waste-tainted runoff from her farm but argued it was agricultural storm water, not "process wastewater" that would be subject to regulation under the Clean Water Act. In its latest motion, EPA said its interpretation of the law "is not a new position developed for enforcement in the Alt order." EPA said it has long held the view that it can require a permit for manure and litter discharged from poultry houses through ventilation fans if it threatens waterways. The cleanliness of Alt's operation today is irrelevant, the agency said. "Plaintiffs seem to imply that a permit is required only for bad actors, or that the requirement to apply for a permit is a punitive measure," the EPA wrote. "That is neither a fair nor accurate assumption." The West Virginia Farm Bureau and the American Farm Bureau have intervened in Alt's case because they say it has economic implications beyond Hardy County. Environmental and consumer groups have intervened on the EPA's side. The Center for Food Safety, Earthjustice, Food & Water Watch, Potomac Riverkeeper, Waterkeeper Alliance, and West Virginia Rivers Coalition also filed a motion for summary judgment Thursday. They say neither Alt's farm "nor the other tens of thousands of commercial farms like it across the country" should be exempt from federal water-protection laws. "This case is not just about the Potomac River, and it is not just about one commercial poultry operation," said Robin Broder of Potomac Riverkeeper. "The Farm Bureau wants this operation and other commercial farms like it to get a free pass from laws that protect the rivers and streams we use for recreation and for drinking water."

A Republican Case for Climate Action

NEW YORK TIMES (Op-Ed 7/1/13)

WILLIAM D. RUCKELSHAUS, LEE M. THOMAS, WILLIAM K. REILLY and CHRISTINE TODD WHITMAN - EACH of us took turns over the past 43 years running the Environmental Protection Agency. We served Republican presidents, but we have a message that transcends political affiliation: the United States must move now on substantive steps to curb climate change, at home and internationally. There is no longer any credible scientific debate about the basic facts: our world continues to warm, with the last decade the hottest in modern records, and the deep ocean warming faster than the earth's atmosphere. Sea level is rising. Arctic Sea ice is melting years faster than projected. The costs of inaction are undeniable. The lines of scientific evidence grow only stronger and more numerous. And the window of time remaining to act is growing smaller: delay could mean that warming becomes "locked in." A market-based approach, like a carbon tax, would be the best path to reducing greenhouse-gas emissions, but that is unachievable in the current political gridlock in Washington. Dealing with this political reality, President Obama's June climate action plan lays out achievable actions that would deliver real progress. He will use his executive powers to require reductions in the amount of carbon dioxide emitted by the nation's power plants and spur increased investment in clean energy technology, which is inarguably the path we must follow to ensure a strong economy along with a livable climate. The president also plans to use his regulatory power to limit the powerful warming chemicals known as hydrofluorocarbons and encourage the United States to join with other nations to amend the Montreal Protocol to phase out these chemicals. The landmark international treaty, which took effect in 1989, already has been hugely successful in solving the ozone problem. Rather than argue against his proposals, our leaders in Congress should endorse them and start the overdue debate about what bigger steps are needed and how to achieve them — domestically and internationally. As administrators of the E.P.A under Presidents Richard M. Nixon, Ronald Reagan, George Bush and George W. Bush, we held fast to common-sense conservative principles — protecting the health of the American people, working with the best technology available and trusting in the innovation of American business and in the market to find the best solutions for the least cost. That approach helped

us tackle major environmental challenges to our nation and the world: the pollution of our rivers, dramatized when the Cuyahoga River in Cleveland caught fire in 1969; the hole in the ozone layer; and the devastation wrought by acid rain. The solutions we supported worked, although more must be done. Our rivers no longer burn, and their health continues to improve. The United States led the world when nations came together to phase out ozone-depleting chemicals. Acid rain diminishes each year, thanks to a pioneering, market-based emissions-trading system adopted under the first President Bush in 1990. And despite critics' warnings, our economy has continued to grow. Climate change puts all our progress and our successes at risk. If we could articulate one framework for successful governance, perhaps it should be this: When confronted by a problem, deal with it. Look at the facts, cut through the extraneous, devise a workable solution and get it done. We can have both a strong economy and a livable climate. All parties know that we need both. The rest of the discussion is either detail, which we can resolve, or purposeful delay, which we should not tolerate. Mr. Obama's plan is just a start. More will be required. But we must continue efforts to reduce the climate-altering pollutants that threaten our planet. The only uncertainty about our warming world is how bad the changes will get, and how soon. What is most clear is that there is no time to waste.

If W. Va. Democrats really want to help coal

COAL TATTOO

Sometimes, it's hard to know where West Virginia could really start in getting on the road toward even having a more reasonable discussion of the future of coal, let alone developing better policies for that future, to help coalfield communities truly prosper and do our state's part to deal with the climate crisis. Yesterday's trip to Washington — and especially the media show that followed — was yet another missed opportunity for Sen. Manchin, Rep. Rahall, Gov. Tomblin, Speaker Miley and other leaders to stop muddling the facts, end the pandering and provide West Virginians with some straight talk about the problems ahead and the path toward a brighter future. I'm reminded, as I often am, of the words of the late Sen. Robert C. Byrd, who advised West Virginians to embrace the future: Change has been a constant throughout the history of our coal industry. West Virginians can choose to anticipate change and adapt to it, or resist and be overrun by it. One thing is clear. The time has arrived for the people of the Mountain State to think long and hard about which course they want to choose. One way West Virginia could try to anticipate change and adapt to it is to become a leader — a real leader — on carbon capture and storage technology. I know, I know ... CCS is too expensive. There are too many questions about whether it can be widely deployed, about whether it's safe, about whether it really works. And, of course, just capturing carbon emissions doesn't do anything to address the environmental damage from mountaintop removal or coal ash pollution, or the health costs to mine workers and the communities near mining operations. But some pretty smart people still say CCS is something that our society here in the U.S. and around the world needs to pursue aggressively. Environmentalists are fond of quoting the findings of the Intergovernmental Panel on Climate Change, so here's what the IPCC said most recently about CCS: To continue to extract and combust the world's rich endowment of oil, coal, peat, and natural gas at current or increasing rates, and so release more of the stored carbon into the atmosphere, is no longer environmentally sustainable, unless carbon dioxide capture and storage (CCS) technologies currently being developed can be widely deployed. And here's what the Union of Concerned Scientists said in a major report issued in October 2008: An important potential benefit of developing CCS technology is that it may someday be applied to power plants that burn or gasify biomass (plant-based materials). Such a power plant could actually be carbonnegative because the plant matter comprising the biomass will have taken CO₂ from the air through the process of photosynthesis, and CCS technology will then capture the CO₂ and store it underground. Having the ability to achieve negative CO₂ emissions in future decades may well be needed if we are to keep global CO₂ concentrations at relatively safe levels. These days, the talking point from coal and its political defenders is that "clean coal" — their shorthand for CCS, really, since they won't talk about other ways coal isn't clean — is that the technology isn't available, that it's not ready to be widely deployed. It's interesting to remember, though, that this wasn't the story we heard from West Virginia political leaders not so long ago ... Back when American Electric Power was kicking off its big CCS demonstration project over in Mason County, W. Va., and local political leaders thought it was the greatest thing they'd ever heard of or seen. Back then, CCS wasn't some far-off thing that wouldn't be ready for years. It was here, now, ready to go. Then-Gov. Manchin said so, back when his Department of Environmental Protection issued a permit for the AEP Mountaineer Plant project: I've always said that we need to discover modern and more environmentally friendly ways to use the tremendous resource we have in West Virginia coal. That technology is here, today ... Of course, this

was back before the Waxman-Markey cap-and-trade bill was killed (before now-Sen. Manchin even got to fire a shot) ... once that happened, and once AEP — without a financial or regulatory reason to pursue CCS — dropped an expansion of its Mountaineer project, West Virginia leaders for the most part stopped most of their talk about CCS. But now that the Obama administration says it's moving forward to write rules to reduce greenhouse emissions from coal-fired power plants, West Virginia leaders have changed their story. Now, CCS isn't ready. EPA is moving too fast. The coal industry needs more time. There is plenty of evidence that more time is needed for CCS, though we really don't have much of an idea of what EPA's timeline will look like. So it's too soon to say if the agency is moving too quickly. But one new report that's out this week suggests maybe CCS could be moved along more quickly than West Virginia leaders are making it sound. In the report, called Understanding Barriers to Commercial-Scale Carbon Capture and Sequestration in the United States: An Empirical Assessment, University of Utah law professors surveyed more than 299 CCS experts to try to understand the state of the technology. Here's the abstract that summarizes their findings: Although a potentially useful climate change mitigation tool, carbon capture and sequestration (CCS) efforts in the United States remain mired in demonstration and development. Prior studies suggest numerous reasons for this stagnation. This article empirically assesses those claims. Using an anonymous opinion survey completed by 229 CCS experts, we identified four primary barriers to CCS commercialization: (1) cost and cost recovery, (2) lack of a price signal or financial incentive, (3) long-term liability risks, and (4) lack of a comprehensive regulatory regime. These results give empirical weight to previous studies suggesting that CCS cost (and cost recovery) and liability risks are primary barriers to the technology. However, the need for comprehensive rather than piecemeal CCS regulation represents an emerging concern not previously singled out in the literature. Our results clearly show that the CCS community sees fragmented regulation as one of the most significant barriers to CCS deployment. Specifically, industry is united in its preference for a federal regulatory floor that is subject to state-level administration and sensitive to local conditions. Likewise, CCS experts share broad confidence in the technology's readiness, despite continued calls for commercial-scale demonstration projects before CCS is widely deployed. What do West Virginia's Democratic leaders on the state level have to do with any of this? Well, it wasn't so long ago that West Virginia was focusing at least some effort on CCS issues. But what's happened since the release of this report more than two years ago? As best I can tell, CCS is barely mentioned in the Tomblin administration's latest state "energy plan". If West Virginia leaders are serious about helping to preserve the coal industry for as long as possible, why aren't they focused on this issue? The only answer to that is that they want to pretend the global warming problem doesn't exist. Every day, though, that becomes a proposition that becomes harder to do with a straight face. Just check out what four former EPA administrators — from the Nixon, Reagan, Bush and W. Bush — administrations say in a New York Times op-ed piece: There is no longer any credible scientific debate about the basic facts: our world continues to warm, with the last decade the hottest in modern records, and the deep ocean warming faster than the earth's atmosphere. Sea level is rising. Arctic Sea ice is melting years faster than projected. The costs of inaction are undeniable. The lines of scientific evidence grow only stronger and more numerous. And the window of time remaining to act is growing smaller: delay could mean that warming becomes "locked in." The continued and concluded: We can have both a strong economy and a livable climate. All parties know that we need both. The rest of the discussion is either detail, which we can resolve, or purposeful delay, which we should not tolerate. Mr. Obama's plan is just a start. More will be required. But we must continue efforts to reduce the climate-altering pollutants that threaten our planet. The only uncertainty about our warming world is how bad the changes will get, and how soon. What is most clear is that there is no time to waste.

Rehoboth rally supports national carbon-reduction effort

DELAWARE CAPE GAZETTE

Legislators, scientists and environmental advocates gathered at the Rehoboth Beach Boardwalk July 31 to support a national initiative to reduce carbon emissions by power plants. President Barack Obama has urged a reduction in emissions in an effort to curb the effects of climate change. For Rep. Pete Schwartzkopf, D-Rehoboth Beach, as representative of the beach town, climate change and sea level rise hit home. He said education is the most important tool in combating climate change and sea level rise. "It's obvious something is going on. And I think the crux of the day is to start to raise awareness. You can't do anything legislatively unless you have public opinion on your side," he said. The effects of climate change can be seen in the increase in extreme weather, Schwartzkopf said, pointing to Hurricane Sandy, which had the biggest storm surge he's ever seen in his 40 years in being around the beaches.

Severe weather is capable of major damage to the coastal economy, a key part of the state's economy, Schwartzkopf said. He said sea level is rising in places like Prime Hook and Bowers Beach. "It is coming, and it is coming faster than previously thought," Schwartzkopf said. Delaware has established carbon emissions standards; speakers including Rehoboth Commissioner Pat Coluzzi applauded Obama's efforts to institute similar legislation on a national level. Neelam Patel, climate program lead with the Department of Natural Resources and Environmental Control, said scientists are seeing significant increases in average temperatures over the last 100 years along with significant increases in precipitation. She said projections for the state indicate that average temperatures will continue to increase over the next 100 years. "The question is, how much can we reduce our emission of heat-trapping gases to reduce the rate of change. We can still impact what is happening in the future regarding precipitation and temperature," she said. Patel said the good thing about the president's climate initiative is that it nationalizes what Delaware has been doing locally in trying to reduce carbon emissions. Broadkill Beach project receives no bids. Among the coastal areas already experiencing sea level rise is Broadkill Beach. A project to rebuild a breached dune and widen the beach was dealt a setback when the U.S. Army Corps of Engineers failed to receive any bids on a proposed \$300 million project to use material dredged from the Delaware River channel to repair the dune and widen Broadkill Beach. Corps spokesman Ed Voigt and DNREC shoreline administrator Tony Pratt said contractors and equipment are still tied up by Hurricane Sandy repair projects in New Jersey and other, more heavily hit areas, so they did not bid on the project. "The dredging companies have too much work from Sandy," Pratt said. Voigt said the corps still plans to finish the project, which will deepen the Delaware River channel by 40 to 45 feet, in 2017. Pratt said plans called for using sand from the bottom of the river to replenish Broadkill Beach at no extra cost to the state. Pratt said he was surprised no one bid, especially because companies are already in the area performing beach renourishment in Fenwick Island and at Indian River Inlet. He said those companies likely have commitments elsewhere immediately following their work in Delaware. Because of the corps' contracting rules, each contract must enter a competitive bid process, Pratt said, so the corps cannot just have the contractors jump into the Broadkill project. The setback at Broadkill Beach has no effect on the ongoing Sandy renourishment efforts already underway in Fenwick Island, Pratt said. That project should continue up the coast as 2013 winds down, ending in Rehoboth sometime in the fall, he said. "We're not sure when we'll do it," Voigt said. "We're assessing the information and then we'll make a decision."

Multistate Chesapeake Bay Cleanup Plan Set for October

ASSOCIATED PRESS(Md.)

Several states in the Chesapeake Bay watershed are working toward having a new cleanup agreement ready by October of this year. The Capital reported in July that a new agreement is in the works with clearer goals and greater flexibility and transparency. It would be the fourth Chesapeake Bay Watershed Agreement in 30 years intended to spur improvements. The last agreement was signed in 2000. The new compact would reflect many of the same broad goals but also some changes. It includes strategies spurred by a 2009 presidential order for a "pollution diet" established by the U.S. Environmental Protection Agency. The order requires water pollution reductions by 2025. For the first time, the agreement includes the "headwaters" states of New York, Delaware and West Virginia, in addition to Maryland, Virginia, Pennsylvania and the District of Columbia.